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USAF Pharmacy Optimization Plan

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Purpose

- Define pharmacy automation and associated initiatives
- Establish optimization plan by phases including automation and Buckley Pharmacy addition
- Provide AF pharmacy optimization overview
- Present Refill Center application overview
- Present targeted pharmacy Robot applications
- Provide detailed information relating to the 3 phase optimization plan
  - Estimated deployment schedules
  - Estimated funding requirements
- Provide estimated return on investment information

Functional Definitions

Automation

- ***Webster's Ninth New Collegiate Dictionary***

  Automatically controlled operation of an apparatus, process, or system by mechanical or electronic devices that take the place of human organs of observation, effort, or decision.

- **Air Force Pharmacy**

  Automation refers to a collection of apparatus, process, and systems (mechanical and/or electronic) to enhance drug distribution and clinical drug therapy management.

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Functional Automation Subsets

- **Robots** ***(Robotics)***
  - **Automated mechanical equipment specifically designed to fill medication vials with tablets or capsules, apply a lid to the vial, and place a prescription label on the vial.**

- **MedMARx** ***(Service)***
  - **Automated standardized medication error reporting system from the United States Pharmacopeia (USP).**
    - **Enhances medication error prevention by providing review and evaluation of medication error reports to find methods to improve medication procedures.**

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Functional Automation Subsets

- **Lexmark Printers** ***(Hardware)***
  - **Standardized label production for all MTF pharmacies and all beneficiaries.**
    - **Provides label for Rx bottles, auxilliary labels, and patient information on one sheet all laser printer quality for improved readability.**
    - **Allows AF pharmacy to be in complete compliance with OBRA 90 requirements, improves patient compliance and medication use through enhanced patient education.**
- **PharmASSIST Enterprise System** ***(Hardware/Software)***
  - **Prescription dispensing and checking system**
    - **Software, digital imagery scanning, workstations, auto-filling dispensers**
    - **Improves overall accuracy of Rx dispensing process, virtually eliminates typing and filling errors**
    - **Increases personnel productivity by streamlining filling process and reducing maintenance requirements**

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Air Force Pharmacy Optimization Overview

- 3 phases of application plan
  - Phase I – O&M funding
    - MedMARx
    - Lexmark Printers - DONE
  - Phase II – FY 2002
    - Buckley Pharmacy
    - Innovation Application
    - Refill Center Pilot
  - Phase III – FY 2003
    - Innovation Application Remainder of CONUS
- Each phase has different financial application and deployment timeframe expectations
- Rate limiting feature - color of money for application and manufacturer capability
- Com Sec requirements for all systems
  - MedMARx is done
  - Enterprise System is being worked at AF COM for AF certification

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Refill Center Application Overview

- **Regionalizing refill process – TRISERVICE application (where beneficial)**
  - **Regional application allows leverage of risk by servicing other areas of pharmacy access**
  - **Example: USAFA Refill Center will initially refill prescriptions from Ft Carson and and Petersen AFB, may include Buckley and FE Warren at a later date**
- **Uses all of Enterprise base system automation with addition of robot technology to create the following benefits:**
  - **Improves utilization of pharmacy personnel and equipment - manpower neutral application**
  - **Decrease refill prescription inventory while increasing available inventory to MTFs for daily use and for readiness requirements**
  - **Allow increase workload at MTF pharmacies using existing personnel**
  - **Provide highest quality, totally integrated, efficient medication filling and checking system currently available**
  - **Provide near error free Rx dispensing,and enhanced patient safety**
    - **Visibility of original Rx throughout life of the Rx (all refills)**

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Targeted Sites for Robot Application

- **10 AF sites selected for robot application**
  - **9 sites based upon criteria below - any one alone or in any combination**
    - **1) Eligible catchment area population of respective MTF**
    - **2) Current prescription volume of respective MTF**
    - **3) Prescription volume recent rate of growth of MTF**
    - **4) No current functioning robot on site**
    - **Nine MTFs include: Travis, Luke, Andrews, Lackland, Nellis, USAFA, Scott, Langley, W-Patterson**
  - **1 site based upon potential regional application to alleviate significant workload to manning ratios from TRISERVICE perspective**
    - **Sheppard AFB (Large population at Dallas/Ft Worth, Army at Ft Sill)**
    - **Potential for add on of refills from Altus and Tinker**

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Phase I

MedMARx & Lexmark Printers

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- **MedMARx**
  - **Automated standardized medication error reporting system from the United States Pharmacopeia (USP).**
  - **Enhances medication error prevention by providing review and evaluation of medication error reports to find methods to improve medication procedures.**

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Air Force MTF MedMARx

- Subscription service $2K per year per MTF
- Central funding for FY02 and 03
  - $4k per facility over first two years
  - Facilities will need to have funding in budget baseline beginning in FY04
- Central funding to be dispersed through MAJCOMs (OPR:SGMC)
- 78 MTFs total
- Centrally funded annual cost - $156K

Lexmark Printers

Lexmark Printers

- **Standardized label production for all MTF pharmacies and all beneficiaries.**
- **Provides label for Rx bottles, auxilliary labels, and patient information on one sheet all laser printer quality for improved readability.**
- **Allows AF pharmacy to be in complete compliance with OBRA 90 requirements, improves patient compliance and medication use through enhanced patient education.**

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Lexmark Printers

- Central Funding through MAJCOMs
- Already funded and printers ordered and shipped
- Printer cost - $2919 each
- Facility requirements dictate cost per MTF
- Some facilities have Lexmark printers in place
- Total # of Printers Required CONUS & OCONUS
  - 175
- Total $ for Printers Required CONUS & OCONUS
  - $510.9K

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Summary Phase I

- MedMaRx
  - Central funded FY02 and FY03, FY04 MTFs fund
    - AF Total cost - $156K per year (78 MTFs)
- Lexmark Printers – quantity and cost by command
  - ACC 34 printers $ 99.3K
  - AETC 46 printers $134.3K
  - AMC 14 printers $ 40.9K
  - AFMC 30 printers $ 87.6K
  - Other CONUS 17 printers $ 49.6K
  - USAFE 17 printers $ 49.6K
  - PACAF 17 printers $ 49.6K
  - TOTAL Lexmark 175 printers $510.9K
- **PHASE I TOTAL - $822.9K ($510.9 already funded/deployed)**

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Pharmacy Optimization Phase II - FY 2002

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Phase II Components

- 3 Components
  - Buckley Pharmacy
  - Innovation Application
  - Refill Center Pilot

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Phase II - FY 2002 Buckley Pharmacy

- Now - small pharmacy serving AD only
- Proposed - full service pharmacy for all beneficiaries
  - Significant population using retail benefit
  - All Rxs filled will be recapture
    - PDTS data revealed about 118K Rx retail filled in catchment sized area around Buckley in FY01
    - Validated PDTS data with Zip Codes provided by MAJCOM
    - Question is how many will migrate to DoD facility?
- Start up with leased space, one RPh, two techs
  - flexibility and room to grow if necessary
  - personnel costs about $180K/ year
  - FY04 projected funded positions 2 RPh, 5 Techs
- AFSPC putting together projected start up costs
  - needed for break down of O&M and OP to provide SGMC
  - expected completion of cost projection March 02

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Phase II - FY 2002 Innovation Application Overview

- Kirtland already done
- *Eglin and Brooks are partially done
- Charleston funded - anticipated operational Mar 02
- Bases that have scheduled expansion or pharmacy moves or automation purchase packages completed will be done ASAP
  - Shaw, Scott, USAFA, Peterson, Beale
- Deployment plan - Northwest to South and East for logisitic simplification
  - Jun 02 – Nellis, Grand Forks, McChord, Fairchild
  - Jul 02 - Mt Home, Ellsworth, FE Warren, Malmstrom, Minot, Offutt
  - Aug 02 – Travis, Vandenburg, Los Angeles, Luke
  - Sep 02 - Davis-Monthan, Cannon, Holloman, McConnell, Whiteman
- Workload volume at five facilities (USAFA, Scott, Nellis, Travis, Luke) significant enough to warrant Robot application
- USAFA chose to partner with Peterson & Ft Carson to establish Refill Center

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Phase II - FY 2002 PharmASSIST Automation

- **PharmASSIST Enterprise System**
  - **Prescription dispensing and checking system**
  - **Software, digital imagery scanning, workstations, auto-filling dispensers**
  - **Improves overall accuracy of Rx dispensing process, virtually eliminates typing and filling errors**
  - **Increases personnel productivity by streamlining filling process and reducing maintenance requirements**
- **Pre-execution estimated funding requirements for FY 02**
  - **$78K O&M Grand Forks**
  - **$6.27M OP includes robot at USAFA**
  - **Base Units at Nellis, Scott, Travis, Luke funded in FY02**
    - **Robots will follow in FY 03**

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Phase II - FY 2002 PharmASSIST Deployment Plan

- Deployment planned on scheduled expansion, pharmacy moves, or automation purchase packages done
- Next - Bases Northwest toward South and East
  - Logistically efficient to manage aggressive deployment timeline
- Vendor visit to MTF - mapping components to existing floor plan
- After site visit the Vendor will provide facility with floor plan and type of equipment required along with real projected cost
- Deployment timeline
  - Targeted Facilities submit site plans, 601, etc.
    - From local Commander to MAJCOM to AFMLO to SG Pharmacy Consultant for approval
  - Equipment ordered - DSCP or VA vehicle (AFMLO designation)
  - After order approx. 6-8 weeks for equipment delivery
  - After delivery approx. 1-2 weeks for installation and training
- Standard system (without robot) does not require any facility redesign for implementation
  - Minimum impact on existing workflow at any facility

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Phase II - FY 2002 Deployment Plan Issues

- Central funding (SG) color money to meet OP/O&M needs
- Central funding for Equipment consisting of PharmASSIST Enterprise System at all AF MTFs and additional Robots at 10 selected AF facilities
- Facility funding requirements limited to additional electrical outlets an network/CHCS computer lines
- Sole source justification being accomplished
- Standardized 601/13 point justification in conjunction with AFMLO
- AFMLO post Pharm Automation WEB site for forms and Info
  - Facilities will be able to retrieve 601, 13 point justification
  - Security documents for equipment
  - Sole Source justification will be posted
  - Deployment plan and schedule will be posted

Phase II - FY 2002
USAFA Refill Center Pilot

- **USAFA establishing a Refill Center as a Pilot Project in conjunction with Peterson and Ft Carson**
  - **MOA development**
    - **Defines specific area application for logistics, inventory funding, courier services, personnel requirements, etc.**
  - **“IF SUCCESSFUL”**
    - **Used as model for other sites where Refill Centers may be cost effective and beneficial**
  - **ESTIMATED funding requirements**
    - **Refill Center Pilot PharmASSIST equipment, fixtures, & misc equipment cost (bundled) $1.92M OP**
      - **Annual maintenance $185K**
      - **Building renovation $300K O&M**

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Phase II - FY 2002 Priorities & Estimated Cost

- **Innovation PharmASSIST Application**
  - **USAFA Refill Center Pilot – $1.92M OP**
  - **USAFA, Peterson standard enterprise system - $652K OP**
  - **Beale standard enterprise system - $178K OP**
  - **Scott and Shaw upgrades - Scott - $221K OP, Shaw - $192K OP**
  - **1st Month post FSS Award – upgrades $580K OP, $78K O&M**
  - **2nd Month post FSS Award – upgrades $890K OP**
  - **3rd Month post FSS Award – upgrades $776K OP**
  - **4th Month post FSS Award – upgrades $914K OP**

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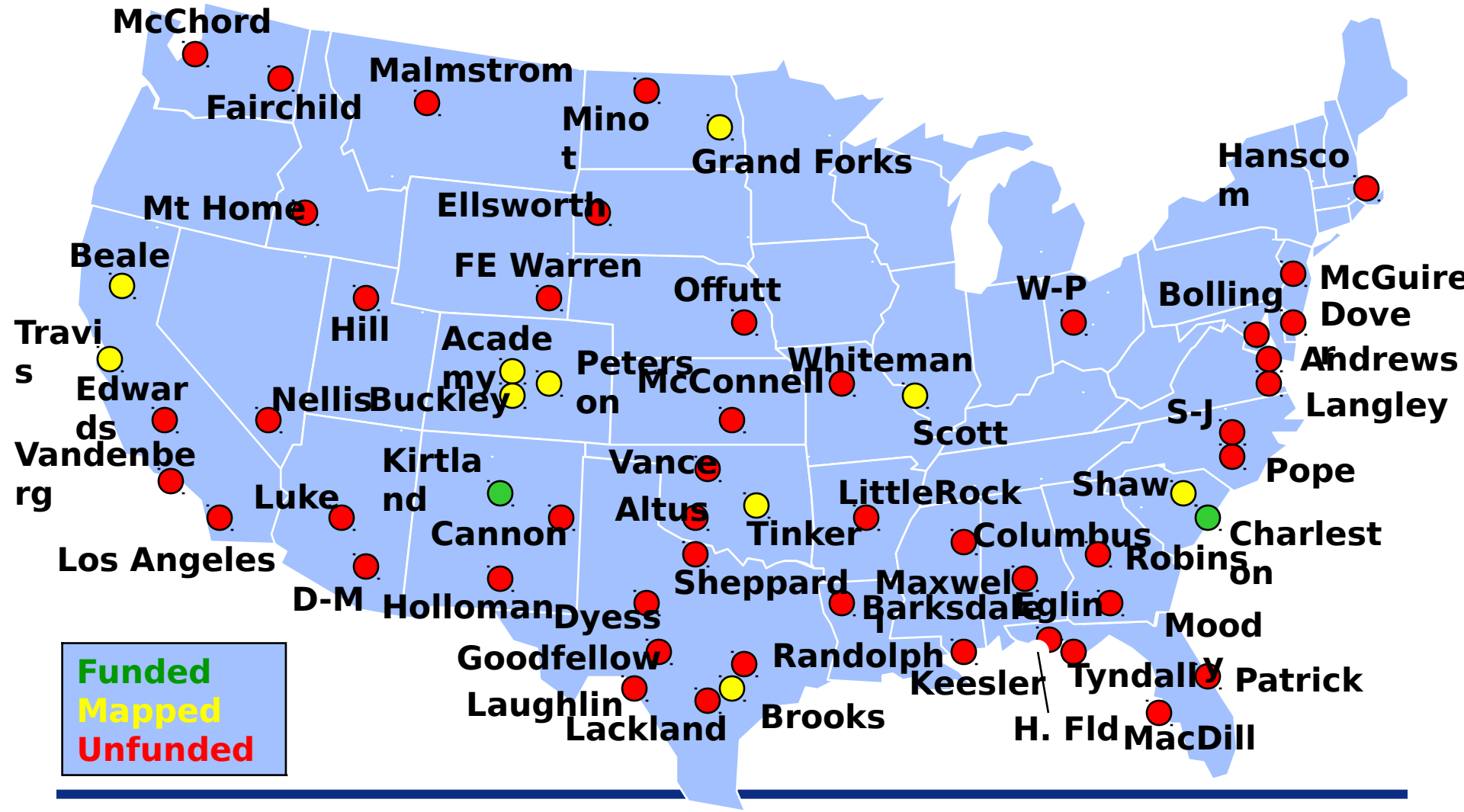
Phase I & II - FY 2002 Summary Estimated Cost

- Phase I
  - MedMARx
    - 156K O&M
- Phase II
  - Buckley
    - $500K O&M and $250K OP
  - Innovation
    - $78K O&M and $3.71M OP
  - USAFA
    - $2.56 OP

- Estimated total O&M required - $734K
- Estimated total OP required - $6.27M

Current CONUS Innovation Application March 2002



Anticipated CONUS Innovation Application End of FY 2002

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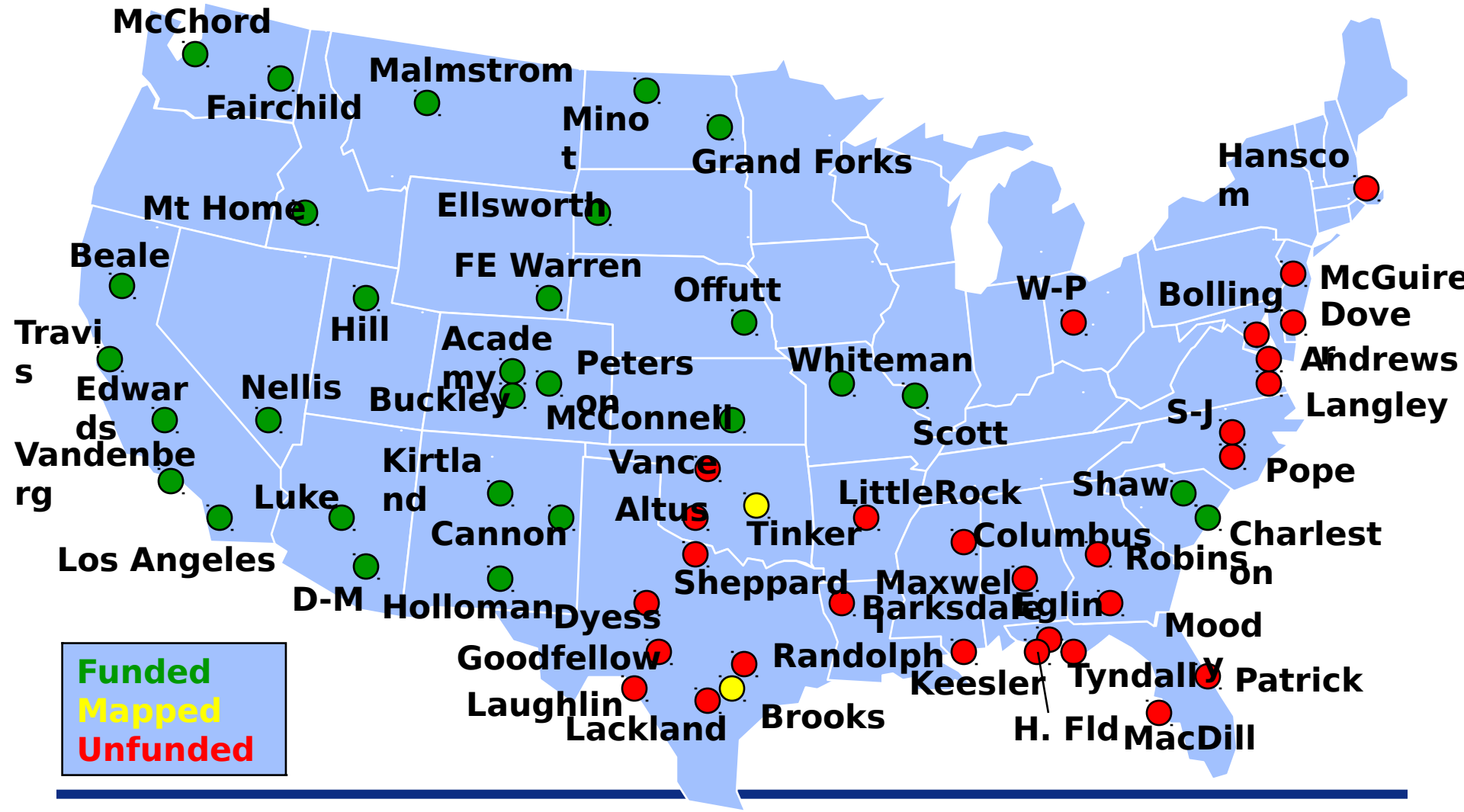

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Phase III - FY 2003 Innovation Application Overview

- **Proceed with application eastward until all remaining CONUS bases have upgraded to Innovation Standard Enterprise System**
- **Priority in FY03**
  - **If USAFA Successful – fund and install 4 robots from FY02 projects**
  - **Nellis, Scott, Travis, and Luke**
    - **$6.72M OP**
  - **Lackland, Sheppard, Langley, Andrews, Wright-Patt Robots**
    - **$10.07M OP**
  - **30 remaining CONUS bases funding requirements**
    - **4 bases require O&M funding….each site <$100K**
    - **Laughlin, Vance, Bolling, Pope $262K**
    - **26 others OP funding total…. $5.78M OP**
  - **18 OCONUS base funding requirements**
    - **9 in PACAF $220K OP and $499K O&M**
    - **9 in USAFE $501K OP and $321K O&M**
- **4 bases considered strong candidates for Refill Centers “IF PILOT AT USAFA IS SUCCESSFUL”**
  - **Sheppard, Lackland, Langley, & Andrews**

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Phase III - FY 2003 Summary Estimated Cost

- Innovation Application Projected Deployment FY 2003
- Estimated OP requirements
  - $17.54M
- Estimated O&M requirements
  - $262K
- UFR
  - 3 Robots (Langley, Andrews, Wright-Patt)
    - $5.04M
  - 3 Base PharmASSIST Units (Wright-Patt, MacDill, Patrick)
    - $913K
  - **Total UFR FY03 $5.95M**

Anticipated CONUS Innovation Application End of FY 2003

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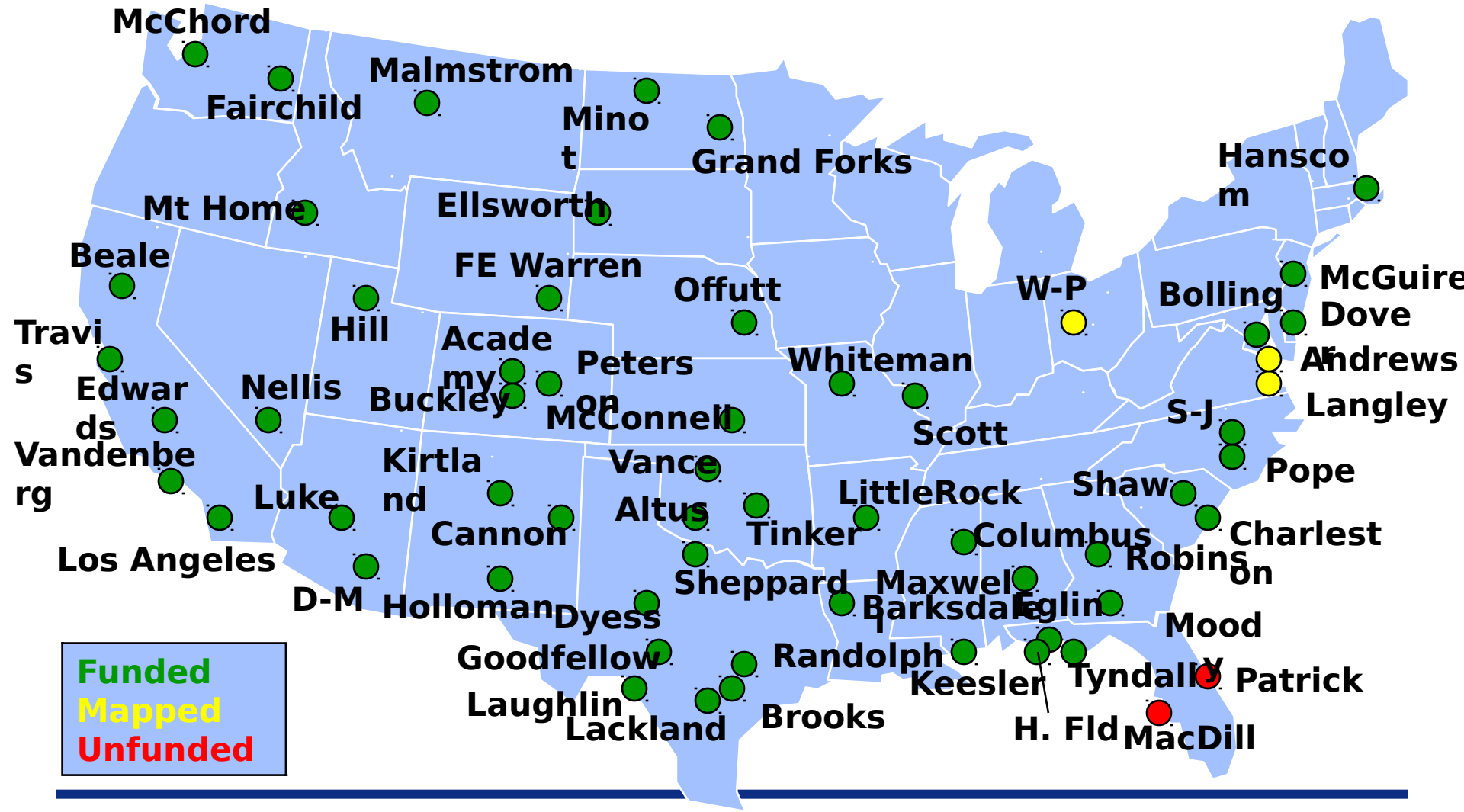

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Summary of Projected Optimization Funding

Anticipated funding requirements for FY 02 Based upon the projected estimates below	OP	$ 6,518,120		
	O&M	$ 733,200	Total Funding Available	$25,000,000
	Total	$ 7,251,320	Spend in 02	$ 7,251,320
			FY02 EOY Balance	$17,748,680
Anticipated funding requirements for FY03 Based upon the projected estimates below	OP	$ 17,231,480	Spend in 03	$17,492,760
	O&M	$ 261,280		
	Total	$ 17,492,760	03 EOY Requirement	$ 5,949,240
	Total OP	$ 23,749,600		
	Total O&M	$ 994,480		
	Grand Total	$ 24,744,080		

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3 Primary Reasons Patients Leave MTF Pharmacies

- 1. Drug is not on the Formulary
  - Not much of an issue if Provider is at the MTF
  - Many patients bring Rx from Private Sector and Formulary can become an issue
- 2. Processing time at the MTF Pharmacy
  - Function of pharmacy setup and personnel
  - Captive audience is gone since 1 Apr 01
  - Competition in Private Sector…something to do while waiting
- 3. Medication errors

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Recapture Initiative

- Fully automated AF pharmacies help mitigate problems associated with processing time and med errors
- Recapture opportunities are maximized with complete optimization application
- Recapture accomplished with TEACHING, EDUCATION, and MARKETING
  - Targets include:
    - MTF, providers, staff, and patients
    - Catchment area Private Sector Health Care Organizations, providers, and staff
    - Managed Care Support Contractors, providers, staff, and patients
    - Retiree Associations and Groups
- Once patients leave it is tough to get them back…not impossible!
  - Mitigation of potential problems along with teaching, education, and marketing can bring back those that prefer comfort level of personnel in uniform or prefer the no co-pay environment

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Recapture Initiative (Continued)

- **Recapture requires mitigation of reasons to use retail network prescription benefit**
  - **Convenience (base access, wait times, parking, etc)**
    - **Provide alternate entry points for access to Rx benefit**
    - **Automation allows increased workload from central location in major market areas with transport to pick-up and drop-off locations**
    - **Example – MacDill and Tampa Bay area**
  - **Retail pharmacy location relative to MTF location**
    - **Refill Centers "MAY" afford opportunities for mailing maintenance meds to beneficiaries in remote areas (smaller MTFs)**
    - **One trip to MTF per year with follow-on mail out the rest of year**
    - **Example – USAFA using excess capacity to fill and mail refills from Northern Tier MTFs (Malmstrom, Minot, FE Warren, Ellsworth, Grand Forks)**

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Metric for 1% Recapture

- **Measure of workload by prescriptions filled quarterly against an established baseline**
  - **Baseline data is FY01 MTF filled prescription data**
  - **Timeframes more frequently than quarterly (i.e., monthly) have too much variation for consistent measure**
  - **Filled prescriptions provide workload identity and pharmacies have the capability to assess compliance**
  - **AF MTFs currently provide quarterly outpatient workload so there is no requirement for additional personnel to accomplish the metric**

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Return On Investment

Summary of Pharmacy Optimization Requirements						
		02	03	04	05	TOTAL
*Optimization $$'s						
	*Refill Centers	$ 5,000,000	$ 7,500,000	$ -	$ -	$ 12,500,000
	*Pharmacy Pkgs-OP	$ 5,408,372	$ 5,290,740	$ -	$ -	$ 10,699,112
	Pharmacy Pkgs-O&M	$ 138,000	$ 138,000	$ 138,000	$ 138,000	$ 552,000
	sub-total	$ 10,546,372	$ 12,928,740	$ 138,000	$ 138,000	$ 23,751,112
Savings		$ 584,279	$ 4,580,745	$ 7,329,193	$ 8,208,696	$ 20,702,913
Refill Centers	**PS (inflated @ 12%)	$ 1,363,317	$ 10,688,406	$ 17,101,450	$ 19,153,624	$ 48,306,796
	DC					
Pharmacy Pkgs	PS					
	DC					
	savings sub-total	$ 1,363,317	$ 10,688,406	$ 17,101,450	$ 19,153,624	$ 48,306,796
**Avoidance						
Refill Centers	PS					
	DC (inflated at 5%)	$ 48,506	$ 356,515	$ 534,773	$ 561,512	$ 1,501,306
Pharmacy Pkgs	PS					
	DC (inflated at 5%)	$ 156,367	$ 1,149,299	$ 1,723,948	$ 1,810,145	$ 4,839,759
	avoidance sub-total	$ 204,873	$ 1,505,814	$ 2,258,721	$ 2,371,657	$ 6,341,065
	Net (cost - savings - avoidance)	$ 8,978,182	$ 734,520	$(19,222,171)	$ (21,387,281)	$ (30,896,750)
	***Required for Reprogramming	$ 379,406	$ 3,074,931	$ 5,070,472	$ 5,837,039	$ 14,361,848

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Return On Investment (Continued)

- **ROI did not include residual value of equipment after FY05**
- **ROI does not yet include Facilities cost (new or renovation)**
  - **Renovation of existing structure $500K**
  - **New construction $1.2M, requires MILCON program, earliest projected FY06**
  - **Adds $4.5M to Project total (not projected in optimization $ originallly)**
- **Savings accomplished with est. 1% recapture**
- **Avoidance accomplished with purchase and maintenance of new equipment versus current Baker Cell annual rental**
- **Reprogramming of funds from Private Sector Bag calculated in to offset increase in direct care O&M costs**
- **Estimates of cost avoidance due to patient safety and compliance may be as high as $3M per year- cannot be audited and therefore are non-quantifiable**
- **Bottom Line**
  - **Total Expense - $25 Million ($29.5M including renovation)**
  - **Return by FY05 - $54.7 Million**

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Summary

- **4 phase plan for pharmacy optimization to maximize recapture and optimize resources**
  - **Phase I - MedMaRx and Lexmark Printers**
    - **Standardized med error reporting provides mechanism for improvement of med procedures - minimizes negative health impact**
    - **Standardized label production - improves patient education and compliance - reduces drug misadventures Funded/Complete**
    - **AF Cost - approximately $156K**
  - **Phase II – FY 2002**
    - **Refill Center Pilot and Innovation Application, 734K O&M and $6.5M OP**
    - **Buckley $ unknown at this time**
  - **Phase III – FY 2003**
    - **OP estimate $17.5M, O&M estimate $262K**
    - **UFR OP estimate $5.95M**

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Conclusions

- **Appropriately applied automation in AF Pharmacies:**
  - **Helps mitigate current and anticipated personnel shortages**
    - **Recruiting bonuses have helped….but there is a nationwide shortage of pharmacists projected for the next 5 to 10 years**
  - **Provides the basis for handling increased workload from recapture initiatives**
    - **Minimizes waiting times**
    - **Minimizes exposure to, and consequences of, med errors**
    - **Potentially provides patient options for access**
    - **Decreases government cost for prescriptions**
- **Funding complete pharmacy optimization is a fundamentally sound business and health care decision**

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How Can the MAJCOM Help?

- **Pharmacy remodel projects**
  - **If any renovation of any pharmacy is planned it may be a beneficial time to coordinate with installation of new equipment**
- **Change over to selected equipment**
  - **Resistance to change at some facilities can be mitigated with the support of the MAJCOM for standardization across the AFMS**
- **Last, but certainly not least….funding**
  - **Any MAJCOM is welcome to fund any piece of the standardized automation at any point in time**

QUESTIONS ??